

## **Flixonase Aqueous Nasal Spray**

### **1 NAME OF THE MEDICINAL PRODUCT**

Flixonase Aqueous Nasal Spray

### **2 QUALITATIVE AND QUANTITATIVE COMPOSITION**

Aqueous suspension of 50mcg/dose micronised fluticasone propionate. Each actuation contains 50 micrograms of fluticasone propionate.

For full list of excipients see section 6.1

### **3 PHARMACEUTICAL FORM**

Nasal spray, suspension

### **4 CLINICAL PARTICULARS**

#### **4.1 Therapeutic indications**

Self medication:

Prophylaxis and treatment of seasonal allergic rhinitis including hay fever in adults.

By Physicians prescription:

- Prophylaxis and treatment of seasonal allergic rhinitis including hay fever in children of the age of 4 years and above.
- Perennial rhinitis in adults and children of the age of 4 years and above.

#### **4.2 Posology and Method of Administration**

Flixonase Aqueous Nasal Spray is for administration by the intranasal route only.

Contact with the eyes should be avoided.

#### Adults and children over 12 years of age:

For the prophylaxis and treatment of seasonal allergic rhinitis and perennial rhinitis. Two sprays into each nostril once a day, preferably in the morning. In some cases two sprays into each nostril twice daily may be required. Once symptoms are under control a maintenance dose of one spray per nostril once a day may be used. If symptoms recur the dosage may be increased accordingly. The minimum dose should be used at which effective control of symptoms is maintained. The maximum daily dose should not exceed four sprays into each nostril.

#### Elderly patients:

The normal adult dosage is applicable.

#### Children under 12 years of age:

For the prophylaxis and treatment of seasonal allergic rhinitis and perennial rhinitis in children aged 4-11 years a dose of one spray into each nostril once daily preferably in the morning is recommended. In some cases one spray into each nostril twice daily may be required. The maximum daily dose should not exceed two sprays into each nostril. The minimum dose should be used at which effective control of symptoms is maintained.

Flixonase Aqueous Nasal Spray should not be prescribed for children for a period of more than 1 month.

For full therapeutic benefit regular usage is essential. The absence of an immediate effect should be explained to the patient, as maximum relief may not be obtained until after 3 to 4 days of treatment.

Prophylaxis of allergic rhinitis requires treatment before contact with allergen.

Shake gently before use.

Before use the bottle needs to be primed by pumping until a fine spray is produced.

### **4.3 Contraindications**

Hypersensitivity to the active substance or any of the excipients listed in section 6.1.

### **4.4 Special warnings and precautions for use**

For OTC :

Treatment should be stopped or the advice of a doctor sought if an improvement is not seen within 7 days. The advice of a doctor or pharmacist should also be sought if symptoms have improved but are not adequately controlled.

This medicine should not be used for more than 3 months continuously without consulting a doctor.

Medical advice should be sought before using this medicine in the case of;

- concomitant use of other corticosteroid products, such as tablets, creams, ointments, asthma medications, similar nasal sprays or eye/nose drops

- fever or an infection in the nasal passages or sinuses.
- recent injury or surgery to the nose, or problems with ulceration in the nose.

For Rx and OTC

Local infections: infections of the nasal airways should be appropriately treated but do not constitute a specific contra-indication to treatment with Flixonase Aqueous Nasal Spray.

The full benefit of Flixonase Aqueous Nasal Spray may not be achieved until treatment has been administered for several days.

Care must be taken while transferring patients from systemic steroid treatment to Flixonase Aqueous Nasal Spray if there is any reason to suppose that their adrenal function is impaired.

Although Flixonase Aqueous Nasal Spray will control seasonal allergic rhinitis in most cases, an abnormally heavy challenge of summer allergens may in certain instances necessitate appropriate additional therapy.

Systemic effects of nasal corticosteroids may occur particularly at high doses prescribed for prolonged periods. These effects are much less likely to occur than with oral corticosteroids preparation and may vary in individual patients and between different corticosteroids preparations. (please refer to Sections 5.1 and 5.2). Potential systemic effects may include Cushing's syndrome, Cushingoid features, adrenal suppression, growth retardation in children and adolescents and more rarely, a range of psychological or behavioural effects including psychomotor hyperactivity, sleep disorders, anxiety, depression or aggression (particularly in children).

Growth retardation has been reported in children receiving some nasal corticosteroids at licensed doses. It is recommended that the height of children receiving prolonged treatment with nasal corticosteroids is regularly monitored. If growth is slowed, therapy should be reviewed with the aim of reducing the dose of nasal corticosteroid, if possible, to the lowest dose at which effective control of symptoms is maintained. In addition, consideration should be given to referring the patient to a paediatric specialist.

Treatment with higher than recommended doses of nasal corticosteroids may result in clinically significant adrenal suppression. If there is evidence for higher than recommended doses being used then additional systemic corticosteroid cover should be considered during periods of stress or elective surgery (see Section 5.1 for data on intranasal fluticasone propionate).

The full benefit of fluticasone propionate aqueous nasal spray may not be achieved until treatment has been administered for several days.

Ritonavir can greatly increase the concentration of fluticasone propionate in plasma. Therefore, concomitant use should be avoided, unless the potential benefit to the patient outweighs the risk of systemic corticosteroid side effects. Significant interactions between fluticasone propionate and potent inhibitors of the cytochrome P450 3A4 system, e.g. ketoconazole and protease inhibitors, such as ritonavir and cobicistat, may occur. This

may result in increased systemic exposure to fluticasone propionate (see 4.5 Interaction with Other Medicinal Products and Other Forms of Interaction).

#### Visual disturbance

Visual disturbance may be reported with systemic and topical corticosteroid use. If a patient presents with symptoms such as blurred vision or other visual disturbances, the patient should be considered for referral to an ophthalmologist for evaluation of possible causes, which may include cataract, glaucoma or rare diseases such as central serous chorioretinopathy (CSCR) which have been reported after use of systemic and topical corticosteroids.

Flixonase Aqueous Nasal Spray contains 0.02 mg benzalkonium chloride in each unit dose, which may cause bronchospasm.

Benzalkonium chloride may cause irritation or swelling inside the nose, especially if used for a long period of time.

### **4.5 Interactions with other medicinal products and other forms of interaction**

Under normal circumstances, low plasma concentrations of fluticasone propionate are achieved after inhaled dosing, due to extensive first pass metabolism and high systemic clearance mediated by cytochrome P450 3A4 in the gut and liver. Hence, clinically significant drug interactions mediated by fluticasone propionate are unlikely.

In an interaction study in healthy subjects with intranasal fluticasone propionate, ritonavir (a highly potent cytochrome P450 3A4 inhibitor) 100 mg b.i.d. increased the fluticasone propionate plasma concentrations several hundred fold, resulting in markedly reduced serum cortisol concentrations. Cases of Cushing's syndrome and adrenal suppression have been reported. The combination should be avoided unless the benefit outweighs the increased risk of systemic glucocorticoid side-effects.

In a small study using inhaled fluticasone propionate in healthy volunteers, the slightly less potent CYP3A inhibitor ketoconazole increased the exposure of fluticasone propionate after a single inhalation by 150%. This resulted in a greater reduction of plasma cortisol as compared with fluticasone propionate alone. Co-treatment with other potent CYP3A inhibitors, such as itraconazole, is also expected to increase the systemic fluticasone propionate exposure and the risk of systemic side-effects. Caution is recommended and long-term treatment with such drugs should if possible be avoided.

Co-treatment with other potent CYP3A inhibitors, including cobicistat-containing products, is expected to increase the risk of systemic side-effects.

Other inhibitors of CYP3A4 produce negligible (erythromycin) and minor (ketoconazole) increases in systemic exposure to fluticasone propionate without notable reductions in serum cortisol concentrations. Care is advised when co-administering cytochrome P450 3A4 inhibitors, especially in long-term use and in case of potent inhibitors, as there is potential for increased systemic exposure to fluticasone propionate.

Combinations should be avoided unless the benefit outweighs the potential increased risk of systemic corticosteroid side-effects, in which case patients should be monitored for systemic corticosteroid side-effects.

#### 4.6 Fertility, Pregnancy and lactation

There is inadequate evidence of safety in human pregnancy. Administration of corticosteroids to pregnant animals can cause abnormalities of foetal development, including cleft palate and intra-uterine growth retardation. There may therefore be a very small risk of such effects in the human foetus. It should be noted however that the foetal changes in animals occur after relatively high systemic exposure; direct intranasal application ensures minimal systemic exposure.

As with other drugs the use of Flixonase Aqueous Nasal Spray during human pregnancy requires that the possible benefits of the drug be weighed against the possible hazards.

The secretion of fluticasone propionate in human breast milk has not been investigated. Subcutaneous administration of fluticasone propionate to lactating laboratory rats produced measurable plasma levels and evidence of fluticasone propionate in the milk. However, following intranasal administration to primates, no drug was detected in the plasma, and it is therefore unlikely that the drug would be detectable in milk. When Flixonase Aqueous Nasal Spray is used in breast feeding mothers the therapeutic benefits must be weighed against the potential hazards to mother and baby.

The label will include a warning that medical opinion should be sought, before using this medicine, in the case of pregnancy or breast feeding.

#### 4.7 Effects on ability to drive and use machines

None reported.

#### 4.8 Undesirable effects

Adverse events are listed below by system organ class and frequency. Frequencies are defined as: very common ( $\geq 1/10$ ), common ( $\geq 1/100$  and  $< 1/10$ ), uncommon ( $\geq 1/1000$  and  $< 1/100$ ), rare ( $\geq 1/10,000$  and  $< 1/1000$ ) and very rare ( $< 1/10,000$ ) including isolated reports and not known (cannot be estimated from the available data). Very common, common and uncommon events were generally determined from clinical trial data. Rare and very rare events were generally determined from spontaneous data. In assigning adverse event frequencies, the background rates in placebo groups were not taken into account.

System Organ Class	Adverse Event	Frequency
Immune system disorders	Hypersensitivity reactions with the following manifestations:	Very rare

	Cutaneous hypersensitivity reactions	Very rare
	Angioedema (mainly facial and oropharyngeal oedema)	Very rare
	Respiratory symptoms (bronchospasm)	Very rare
	Anaphylactic reactions	Very rare
<b>Nervous system, disorders</b>	Headache, unpleasant taste, unpleasant smell	Common
<b>Eye disorders</b>	Glaucoma, raised intraocular pressure, cataract These events have been identified from spontaneous reports following prolonged treatment.	Very rare
	Vision, blurred	Not known (see section 4.4)
<b>Respiratory, Thoracic &amp; Mediastinal disorders</b>	Epistaxis	Very common
	Nasal dryness, nasal irritation, throat dryness, throat irritation	Common
	Nasal septal perforation	Very rare
	Nasal ulcers	Not known

As with other nasal sprays, unpleasant taste and smell and headache have been reported.

As with other nasal sprays, dryness and irritation of the nose and throat, and epistaxis have been reported.

Nasal ulceration and nasal septal perforation have been reported following the use of intranasal corticosteroids, usually when there has been previous nasal surgery.

#### Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product.

Any suspected adverse events should be reported to the Ministry of Health according to the National Regulation by using an online form: <https://sideeffects.health.gov.il>

Additionally, please also report to GSK Israel ([il.safety@gsk.com](mailto:il.safety@gsk.com)).

## 4.9 Overdose

There are no data from patients available on the effects of acute or chronic overdosage with Flixonase Aqueous Nasal Spray. Intranasal administration of 2 mg fluticasone propionate twice daily (20 times the recommended starting dose in adults) for seven days to healthy human volunteers has no effect on hypothalamo-pituitary-adrenal (HPA) axis function.

Inhalation or oral administration of high doses of corticosteroids over a long period may lead to suppression of HPA axis function.

### Treatment

Administration of doses higher than those recommended over a long period of time may lead to temporary suppression of adrenal function.

In these patients, treatment with fluticasone propionate should be continued at a dose sufficient to control.

## 5 PHARMACOLOGICAL PROPERTIES

### 5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Decongestants and other nasal preparations for topical use . Corticosteroids

ATC Code: R01AD08

Fluticasone propionate has been shown to reduce inflammatory mediators in both the early and late phase reactions of allergic rhinitis.

Once daily dosing with 200µg fluticasone propionate is sufficient to help relieve symptoms (particularly nasal congestion) for up to 24 hours.

Fluticasone propionate is a glucocorticosteroid which has potent anti-inflammatory activity by acting via the glucocorticoid receptor. However, when used at up to four times the recommended daily dose on the nasal mucosa, has no detectable systemic activity and causes little or no hypothalamic-pituitary-adrenal axis suppression following intranasal administration.

Following intranasal dosing of fluticasone propionate, (200mcg/day) no significant change in 24h serum cortisol AUC was found compared to placebo (ratio1.01, 90%CI 0.9-1.14).

In a 1-year randomised, double-blind, placebo-controlled, parallel group growth study in pre-pubescent children aged 3 to 9 years (56 patients receiving intranasal fluticasone propionate and 52 receiving placebo,) no statistically significant difference in growth velocity was observed in patients receiving intranasal fluticasone propionate (200 micrograms per day nasal spray) compared to placebo. The estimated growth velocity over one year of treatment was 6.20 cm/year

(SE=0.23) in the placebo group and 5.99 cm/year (SE=0.23) in the fluticasone propionate group; the mean difference between treatments in growth velocity after one year was 0.20 cm/year (SE=0.28, 95% CI= -0.35, 0.76). No evidence of clinically relevant changes in HPA axis function or bone mineral density was observed as assessed by 12-hour urinary cortisol excretion and dual-energy x-ray absorptiometry, respectively.

## 5.2 Pharmacokinetic properties

**Absorption:** Following intranasal dosing of fluticasone propionate, (200 mcg/day) steady-state maximum plasma concentrations were not quantifiable in most subjects (<0.01ng/mL). The highest C<sub>max</sub> observed was 0.017ng/mL. Direct absorption in the nose is negligible due to the low aqueous solubility with the majority of the dose being eventually swallowed. When administered orally the systemic exposure is <1% due to poor absorption and pre-systemic metabolism. The total systemic absorption arising from both nasal and oral absorption of the swallowed dose is therefore negligible.

**Distribution:** Fluticasone propionate has a large volume of distribution at steady-state (approximately 318L). Plasma protein binding is moderately high (91%).

**Metabolism:** Fluticasone propionate is cleared rapidly from the systemic circulation, principally by hepatic metabolism to an inactive carboxylic acid metabolite, by the cytochrome P450 enzyme CYP3A4. Swallowed fluticasone propionate is also subject to extensive first pass metabolism. Care should be taken when co-administering potent CYP3A4 inhibitors such as ketoconazole and ritonavir as there is potential for increased systemic exposure to fluticasone propionate.

**Elimination:** The elimination rate of intravenous administered fluticasone propionate is linear over the 250-1000 mcg dose range and are characterized by a high plasma clearance (CL=1.1L/min). Peak plasma concentrations are reduced by approximately 98% within 3-4 hours and only low plasma concentrations were associated with the 7.8h terminal half-life. The renal clearance of fluticasone propionate is negligible (<0.2%) and less than 5% as the carboxylic acid metabolite. The major route of elimination is the excretion of fluticasone propionate and its metabolites in the bile.

## 5.3 Preclinical safety data

There are no preclinical data of relevance to the prescriber which are additional to that already included in other sections of the SPC.

# 6 PHARMACEUTICAL PARTICULARS

## 6.1 List of excipients



Dextrose (anhydrous)  
Microcrystalline cellulose and  
Sodium Carboxymethylcellulose  
Phenylethyl alcohol  
Benzalkonium chloride  
Polysorbate 80  
Purified water  
Dilute hydrochloric acid

## **6.2 Incompatibilities**

None reported

## **6.3 Shelf life**

The expiry date of the product is indicated on the packaging materials.

## **6.4 Special precautions for storage**

Do not store above 30°C.

## **6.5 Nature and contents of container**

Amber glass bottle fitted with a metering, atomizing pump.  
Each bottle provides 120 metered sprays.

## **6.6 Special precautions for disposal**

No special instructions.

## **7 MANUFACTURER**

Glaxo Wellcome S.A., Burgos, Spain

## **8 LICENSE HOLDER AND IMPORTER**

GlaxoSmithKline (Israel) Ltd., 25 Basel St., Petach Tikva

## **9 LICENSE NUMBER**

060-33-26912-00

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